

## A PRELIMINARY LIST OF THE COLLEMBOLA OF KENTUCKY<sup>1 2</sup>

Jack S. Csshafft, Jr.<sup>3</sup>

**ABSTRACT:** This first published list of the Collembola of Kentucky records 89 species representing 34 genera. Seventy-two species are reported from the state for the first time. Sources of records are: (1) specimens collected from various parts of the state by the author; (2) specimens from the University of Louisville; and (3) specimens from the University of Kentucky. County records are included, and cave specimens are noted.

**DESCRIPTORS:** Collembola, Kentucky, springtails, taxonomic lists.

Collembola have received little attention in the United States, especially in the Appalachian region. Christiansen (1960a, 1960b, 1964) has reported extensively on Kentucky cave Collembola of the genera *Sinella*, *Pseudosinella*, and *Tomocerus*. Christiansen (1958) also lists several surface springtails of the family Entomobryidae; other than these species, little is known of the epigeic springtails of Kentucky.

Specimens were collected by the author from various areas around the state from February 1975 to August 1976, by means of hand collecting, Berlese funnel, and a "small cannister apparatus" (Macfayden, 1961). In addition, the collections of the Universities of Louisville and Kentucky were identified.

One area of major interest, in regards to the collembolan fauna, was Bernheim Forest (Bullitt Co.), where I worked on an insect survey team conducting a study of forest collembolan populations.

The list of species which follows is arranged according to Gisin (1960). Species previously recorded from the state are preceded by  $\Delta$  and the reference is given. Species known to occur in Bernheim Forest are preceded by \*. County records are given and cave specimens are identified as such.

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<sup>1</sup> Accepted for publication: December 20, 1976

<sup>2</sup> Portion of the thesis presented to the University of Louisville in partial fulfillment of the requirements for the degree of M.S.

<sup>3</sup> Present address: B.P. 107 - C.W.S., Agades, Niger, W. Africa.

ARTHROPLEONA  
 PODUROIDEA  
 PODURIDAE  
 PODURINAE

*Podura aquatica* L. – Jefferson, Oldham

HYPOGASTURINAE

- Hypogastrura armata* (Nicolet) – Fayette  
 \**Hypogastrura denticulata* (Bagnall) – Bullitt, Jefferson  
*Hypogastrura macrospinata* Maynard – Morgan  
*Hypogastrura matura* (Folsom) – Wolfe  
*Hypogastrura tullbergi* Schaffer – Fayette, Jefferson, Wolfe

NEANURINAE

- \**Odontella* sp. – Bullitt  
 \**Pseudachorutes rugatus* Wray – Bullitt, Shelby  
 \**Anurida pygmaea* (Borner) – Bullitt  
 \**Neanura barberi* (Handshin) – Bullitt  
*Neanura muscorum* (Templeton) – Carroll, Menifee  
 \**Neanura* sp. – Bullitt  
*Micranurida* sp. – Morgan

ONYCHIURIDAE

- \**Onychiurus fimetarius* L. – Anderson, Bullitt, Jefferson  
*Onychiurus pseudarmatus* Folsom – Bullitt, Morgan  
 \**Onychiurus ramosus* Folsom – Bullitt  
 \**Onychiurus similis* Folsom – Bullitt, Jefferson, Owen, Powell, Shelby  
 \**Onychiurus subtenuis* Folsom – Anderson, Bullitt, Fayette, Henry, Jefferson, Menifee, Owen, Shelby, Spencer, Wolfe  
 \**Tullbergia* sp. (in desc. Christiansen-Bellinger) – Bullitt, Morgan

ENTOMOBRYOIDEA  
 ISOTOMIDAE  
 ISOTOMINAE

- \**Tetracanthella ethelae* Wray – Anderson, Bullitt, Jefferson  
 \**Folsomia nivalis* (Packard) – Bullitt, Jefferson  
 \**Folsomia duodecimoculata* Ford – Bullitt, Shelby  
 \**Folsomia macroseta* Ford – Bullitt  
*Folsomia candida* Willem – Jefferson  
 \**Folsomia prima* Mills – Bullitt  
 \**Folsomia stella* Christiansen – Bullitt, Owen  
 \**Isotoma tarspinata* MacGillvray – Bullitt, Carter, Jefferson  
*Isotoma subaequalis* Folsom – Jefferson, Oldham  
 \**Isotoma carpenteri* Borner – Bullitt, Menifee, Morgan, Wolfe  
 \**Isotoma japonica* Yossi – Bullitt, Jefferson  
*Isotoma* sp. (in desc. Christiansen-Bellinger) – Carter (cave)  
*Isotoma viridis* Bourlet – Carroll, Jefferson, Oldham, Shelby  
 \**Isotomiella minor* (Schaffer) – Bullitt  
*Degamea tenuis* (Folsom) – Fayette  
*Isotomurus* sp. (in desc. Christiansen-Bellinger) – Jefferson  
*Isotomurus palustris* (Muller) – Jefferson

ENTOMOBRYIDAE  
TOME CERINAE

- Δ \**Tomocerus bidentatus* Folsom – Adair (cave), Allen (cave), Barren (cave), Carter (cave), Edmonson (cave), Hart (cave), Powell (cave), Polaski (cave), Warren (cave), (Christiansen, 1964).  
Bullitt, Carter, Jefferson, Menifee, Metcalfe (cave), Morgan, Powell, Russell, Shelby, Spencer, Wolfe  
*Tomocerus celsus* Christiansen – Jefferson, Wolfe
- Δ *Tomocerus dubius* Christiansen – Edmonson (cave), Johnson (cave), Barren (cave), (Christiansen, 1964).  
Menifee
- \**Tomocerus flavescens* (Tullberg) – Bullitt, Carter, Carroll, Fayette, Jefferson, Lawrence, Menifee, Oldham, Powell, Shelby, Wolfe
- Δ *Tomocerus elongatus* Maynard – Carter (cave), Edmonson (cave), Elliot (cave), Hardin (cave), Hart (cave), (Christiansen, 1964).  
Jefferson, Oldham, Owen, Powell, Russell, Wolfe
- Δ *Tomocerus lamelliferus* (Mills) - Edmonson (cave), (Christiansen, 1964)
- Δ *Tomocerus missus* (Mills) – Livingston (cave), (Christiansen, 1964)
- Tomocerus vulgaris* Tullberg – Oldham, Powell

ENTOMOBRYINAE

- Entomobrya assuta* Folsom – Jefferson
- Entomobrya atrocincta* Schott – Jefferson
- Entomobrya bicolor* Guthrie – Jefferson
- Entomobrya decemfasciata* (Packard) – Carter, Jefferson
- \**Entomobrya multifasciata* Tullberg – Bullitt, Jefferson, Oldham
- Δ \**Entomobrya nivalis* L. – Crailhope (Christiansen, 1958). Bullitt, Jefferson, Oldham
- Δ *Entomobrya quadrilineata* Bueker – Crailhope (Christiansen, 1958).  
*Entomobrya sauteri* (Borner) – Jefferson
- Entomobryoides purpurascens* (Packard) – Anderson, Shelby, Fayette
- Entomobryoides dissimilis* (Moniez) – Powell, Spencer
- \**Pseudosinella alba* (Packard) – Bullitt
- Δ *Pseudosinella argentea* Folsom – Kentucky (cave), (Christiansen, 1960b)  
*Pseudosinella cavernorum* (Moniez) – Jefferson
- Pseudosinella collina* Wray – Menifee
- Δ *Pseudosinella boneti* Christiansen – Pulaski (cave), (Christiansen, 1960b)
- Δ *Pseudosinella doudecimpunctata* Denis – Jackson (cave), (Christiansen, 1960b)  
*Pseudosinella espana* Christiansen – Metcalfe (cave)
- Δ *Pseudosinella hirsuta* (Delamare) – South-central Kentucky (cave), (Christiansen, 1960b)  
*Pseudosinella petterseni* Borner – Wolfe, Metcalfe (cave)
- Δ \**Pseudosinella sexoculata* Schott – Fayette (cave), (Christiansen, 1960b) Bullitt, Carter, Jefferson, Oldham
- \**Pseudosinella violenta* (Folsom) – Anderson, Bullitt, Carroll, Jefferson, Lawrence, Meade, Owen
- Δ *Sinella avita* Christiansen – Crittenden (cave), Livingston (cave) (Christiansen, 1960a)
- Δ \**Sinella barri* Christiansen – Kentucky (cave) (Christiansen, 1960a)  
Bullitt
- Δ *Sinella cavernorum* (Packard) - Kentucky (cave) (Christiansen, 1960a)
- Δ *Sinella krekeleri* Christiansen – Jackson (cave) (Christiansen, 1960a)
- Δ *Sinella basidens* Bonet – Fayette (cave) (Christiansen, 1960a)
- Lepidocyrtus alleganyensis* Maynard – Oldham

- \**Lepidocyrtus cinereus* Folsom – Bullitt  
 \**Lepidocyrtus cyaneus* Tullberg – Bullitt, Carter, Jefferson, Morgan, Powell  
 \**Lepidocyrtus helenae* Snider – Anderson, Bullitt, Jefferson, Morgan, Oldham  
*Lepidocyrtus unifasciatus* James – Menifce, Powell  
*Lepidocyrtus violaceus* Fourcroy – Jefferson  
*Orchesella ainslicii* Folsom – Jefferson  
*Orchesella cincta* (L.) – Powell, Wolfe  
 \**Orchesella* sp. – Bullitt, Fayette

SYMPHYPLEONA  
 SMINTHURIDAE  
 NEELINAE

- \**Megalothorax minimus* Willem – Bullitt  
 SMINTHURIDINAE  
 \**Sminthurides* spp.  
 \**Sminthurinus* spp.  
*Katiamina macgillivrayi* (Banks) – Menifce  
 SMINTHURINAE

- \**Sminthurus* spp.  
*Neosminthurus* spp.  
*Neosminthurus clavatus* Mills – Menifce, Oldham  
*Pararrhopalites* spp.

DICYRTOMINAE

- Dicyrtoma ochroea* Wray – Jefferson, Powell  
*Dicyrtoma purpurata* Maynard – Carter, Morgan, Wolfe  
*Dicyrtoma quadrangularis* Mills – Carter  
*Ptenothrix marmorata* Packard – Jefferson, Menifce, Nelson  
*Ptenothrix pineolae* Wray – Jefferson, Oldham  
*Ptenothrix unicolor* Harvey – Jefferson, Nelson

ACKNOWLEDGEMENTS

I would like to thank Dr. K. Christiansen for aiding in the identification of numerous specimens; Bernheim Forest for their help and consideration; Drs. C.W. Covell and P. Freytag of the Universities of Louisville and Kentucky for lending numerous specimens; and Mr. Doug Barnett who collected and mounted most of the Univ. of Kentucky specimens.

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